AMENDMENTS TO THE CLAIMS

1.-24. (Canceled)

25. (Currently Amended) A method for correcting at least one aberration in an optical system, comprising:

providing a radiation adjustable layer to a component of the system;

determining the at least one aberration; and

applying radiation to the radiation adjustable layer such as to modify an optical characteristic of the radiation adjustable layer to at least partially compensate for the at least one aberration;

wherein the adjustable layer comprises a polymer matrix, and a radiation sensitive refraction modulating composition dispersed in the polymer matrix.

26. (Previously Presented) The method of claim 25 wherein the component is a refractive element.

27. (Previously Presented) The method of claim 25 wherein the component is a reflective element.

28. (Previously Presented) The method of claim 25 wherein the optical system is selected from the group consisting of:

a telescope, and a camera.

29. (Currently Amended) The method of claim 25 wherein the applying comprises:

applying the radiation in a pattern [[from]] based on the determining the at least one aberration.

30. (Previously Presented) The method of claim 29 wherein the pattern is opposite in phase to the determined aberration.

31.   (Previously Presented) The method of claim 29 wherein the applying comprises:

generating the radiation with a vertical-cavity surface-emitting laser array.

32.   (Previously Presented) The method of claim 29 wherein the applying comprises:

using an apodizing filter having a predetermined transmission intensity profile to form the pattern.

33.   (Previously Presented) The method of claim 29 wherein the applying comprises:

using a liquid crystal cell to form the pattern.

34.   (Previously Presented) The method of claim 29 wherein the applying comprises:

using a spatial light modulator to form the pattern.

35.   (Previously Presented) The method of claim 29 wherein the applying comprises:

using a digital light processor to form the pattern.

36.   (Previously Presented) The method of claim 29 wherein the applying comprises:

using a digital mirror device to form the pattern.

37.   (Previously Presented) The method of claim 29 wherein the pattern has an intensity profile that changes as the radius of the pattern increases from the center of the pattern.

38.   (Previously Presented) The method of claim 25 wherein the applying comprises:

controlling the radiation during the applying.

39.   (Currently Amended) The method of claim [[28]] 38 wherein the controlling comprises:

controlling at least one of intensity and duration of the radiation.

40.   (Canceled)

41.   (Previously Presented) The method of claim 25 wherein the radiation is ultraviolet light.

42.   (Previously Presented) The method of claim 25 wherein the determining comprises:

using a Shack-Hartmann sensor to determine the aberration.

43.   (Previously Presented) The method of claim 25 further comprising:

irradiating, subsequent to applying, the adjustable layer to lock in the modified characteristic.

44.   (Previously Presented) The method of claim 43, wherein the irradiating comprises:

applying a lock-in pattern that has a top hat intensity profile.

45.   (Previously Presented) The method of claim 43, wherein the irradiating comprises:

applying a lock-in pattern that has an intensity profile that diminishes as the radius increases from the center.

46.   (Currently Amended) An optical element comprising:

a portion that affects a path of incident light; and

a layer that is adjacent to the portion and is adjustable such that radiation modifies

at least one optical characteristic of the layer;

wherein the layer comprises a polymer matrix, and a radiation sensitive refraction modulating composition dispersed in the polymer matrix.

47.   (Previously Presented) The element of claim 46 wherein the element is a component of a optical system is selected from the group consisting of:

a telescope, and a camera.

48.   (Previously Presented) The element of claim 46 wherein the element is a refractive element.

49.   (Previously Presented) The element of claim 46 wherein the element is a reflective element.